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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,793	02/20/2002	Clifford N. Click JR.	SUN1P231C1/P3911	2841
22434	7590	07/05/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			PHAM, CHRYSTINE	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	
			2192	

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/080,793

Applicant(s)

CLICK ET AL.

Examiner

Chrystine Pham

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This action is responsive to Amendment filed on April 13<sup>th</sup> 2005. Claims 1, 3, and 5 have been amended. Claims 2 and 4 have been canceled. Claims 6-8 have been withdrawn. Claims 9-16 are new claims. Claims 1, 3, 4, 9-16 are presented for examination.

***Response to Amendment***

2. In view of the amendment to claim 3 to correct the misspelling of the word "identifies", objection to claim 3 is hereby withdrawn.
3. In view of the amendment to claim 5 to omit the non-statutory "data signal embodied in a carrier wave", 35 USC 101 rejection of claim is hereby withdrawn.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:  
*Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.*
6. Claim 3 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 3 recites "a computer readable medium that stores the computer codes". On page 9, 2<sup>nd</sup> paragraph, the specification describes the computer readable medium as "data signal embodied in a carrier wave", which does not limit the claimed "product" to **tangible** products and media because "a carrier wave" is an intangible medium incapable of being touched or perceived absent the tangible medium through which it is conveyed. Such intangible product constitutes a nonstatutory manufacture.

**Claim Rejections - 35 USC § 102**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –*

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

8. Claims 1, 3, 5, 9, 10, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelegri-Llopert et al. (*Pelegri*, US 5999988).

**Claim 1**

*Pelegri* teaches in a computer system (see at least FIG.3 & associated text), a method for generating an adapter/stub (see at least *run-time, new stub class* col.6:33-65) for a virtual machine (see at least 11, 15 FIG.1 & associated text; 11, 15 Fig.3 & associated text; *virtual machine, local machine, remote machine* col.6:42-50) during runtime (see at least 410 FIG.3 & associated text; 816 Fig.10 & associated text; 910 Fig.11 & associated text), comprising:

- identifying a machine state input parameter for a machine state (see at least *stub class, remote object, second virtual machine* col.4:15-55);
- identifying input parameters for a call to compiled code (see at least *clients, object handles, remote objects, stub objects* col.2:50-67);
- mapping the machine state input parameter and the machine state to the input parameters for the call to compiled code (see at least *stub class, remote object, second virtual machine* col.4:15-55);
- and
- mapping the machine state and a return value to an exit point of an interpreter to compiled code adapter (see at least *virtual machine 11, 15, stub 60, object 62, remote object 1* FIG.1 & associated text).

- o providing a stub representation to a compiler for compilation (see at least 410 FIG.3 & associated text); and
- o generating object code base upon the compilation (see at least *run-time stub* 60 col.6:33-65; *Java* col.13:50-55).

### Claim 3

*Pelegri* teaches a computer program product (see at least *instructions, memory 1704* col.14:37-50) that implements an apparatus for generating an adapter/stub (see at least *run-time, new stub class* col.6:33-65) for a virtual machine (see at least 11, 15 FIG.1 & associated text; 11, 15 Fig.3 & associated text; *virtual machine, local machine, remote machine* col.6:42-50) during runtime (see at least 410 FIG.3 & associated text; 816 Fig.10 & associated text; 910 Fig.11 & associated text), comprising:

- o computer code that identifies a machine state input parameter for a machine state (see at least *stub class, remote object, second virtual machine* col.4:15-55);
- o computer code that identifies input parameters for a call to compiled code (see at least *clients, object handles, remote objects, stub objects* col.2:50-67);
- o computer code that maps the machine state input parameter and the machine state to the input parameters for the call to compiled code (see at least *stub class, remote object, second virtual machine* col.4:15-55);
- o computer code that maps the machine state and a return value to an exit point of an interpreter to compiled code adapter (see at least *virtual machine 11, 15, stub 60, object 62, remote object 1* FIG.1 & associated text);
- o computer code that provides a stub representation to a compiler for compilation (see at least 410 FIG.3 & associated text); and
- o computer code that generates object code based upon the compilation (see at least *run-time stub 60* col.6:33-65; *Java* col.13:50-55); and
- o a computer readable medium that stores the computer codes (see at least *memory 1704, disk 1707* col.14:5-55).

**Claim 5**

The rejection of base claim 3 is incorporated. *Pelegri* further teaches wherein the computer readable medium is selected from the group consisting of CD-ROM, floppy disk, tape, flash memory, system memory, and hard drive (see at least *memory 1704, disk 1707* col.14:5-55).

**Claim 9**

The rejection of base claim 1 is incorporated. *Pelegri* further teaches wherein the method is performed in response to a determination that the adapter/stub is not stored in an adapter/stub library associated with the computer system (see at least *618* FIG.8 & associated text; *stub class cache check unit 614, stub class cache 618, stub class generator 620* col.9:65-col.10:13).

**Claim 10**

The rejection of base claim 9 is incorporated. *Pelegri* further teaches wherein the determination is performed when compiled code is to be executed by the computer system (see at least *client application 9, stub 60, object handle 62, remote object 1* FIG.1 & associated text), and the computer system determines that an interpreter to compiled code (I/C) adapter/stub is required (see at least *618* FIG.8 & associated text; *stub class cache check unit 614, stub class cache 618, stub class generator 620* col.9:65-col.10:13).

**Claim 13**

The rejection of base claim 3 is incorporated. Claim recites limitations, which have been addressed in claim 9, therefore, is rejected for the same reasons as cited in claim 9.

**Claim 14**

The rejection of base claim 13 is incorporated. Claim recites limitations, which have been addressed in claim 10, therefore, is rejected for the same reasons as cited in claim 10.

**Claim Rejections - 35 USC § 103**

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

10. Claims 11, 12, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pelegri* in view of *McQuistan et al.* (*McQuistan*, US 6321275 B1).

**Claim 11**

The rejection of base claim 1 is incorporated. *Pelegri* further teaches wherein the adapter/stub is a platform-specific interpreter to compiled code (I/C) adapter/stub (see at least *object handles, remote objects, process, remote machine, local machine, stub objects* col.2:50-67). *Pelegri* does not expressly disclose the adapter/stub [that] is used to translate an execution stack used by an interpreter into an execution stack that can be used by compiled code.

However, *McQuistan* discloses adapter/stub is a platform-specific interpreter to compiled code (I/C) adapter/stub (see at least *client stub 408, interpreter 404* col.6:47-67; FIG.4 & associated text) that is used to translate an execution stack used by an interpreter (see at least *interpreter 418, argument stack, runtime* col.7:4-26) into an execution stack that can be used by compiled code (see at least *argument stack, caller, client stub* col.8:35-50). *Pelegri* and *McQuistan* are analogous art because they are both directed to compiling adapter/stub code. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McQuistan* into that of *Pelegri* for the inclusion of translating the execution stack. And the motivation for doing so would have been to enable invocation of the remote object (i.e., function) by translating data from a format acceptable

to a communication mechanism to a format acceptable to a the function at runtime (see *McQuistan* col.1:65-col.2:22; col.4:13-45).

**Claim 12**

The rejection of base claim 11 is incorporated. *Pelegri* further teaches wherein the adapter/stub is further operable to update the states of different components of the computer system (see at least *objects, state, class, member functions* col.1:37-col.2:2; *clients, object handles, remote objects, member functions, stub objects* col.2:50-67).

**Claim 15**

The rejection of base claim 3 is incorporated. Claim recites limitations, which have been addressed in claim 11, therefore, is rejected for the same reasons as cited in claim 11.

**Claim 16**

The rejection of base claim 15 is incorporated. Claim recites limitations, which have been addressed in claim 12, therefore, is rejected for the same reasons as cited in claim 12.

**Conclusion**

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be



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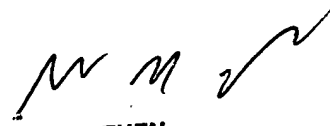
calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chrystine Pham whose telephone number is 571-272-3702. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CP  
June 20, 2005

  
**WEI Y. ZHEN**  
**ARY EXAMINER**